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COMPILED BY

ANNA B. HASTINGS, M.A., Ph.D.

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CONTENTS

	PAGE
I. TITLES	3
II. SUBJECT INDEX	6
III. SYSTEMATIC INDEX	7

I. TITLES

- Abrikossov, G. G.** *see* Kolosvári, G.
- Allen, W. E.** *see* Coe, W. R.
- Androsova, H.** Nekotorie dannie po faune Machanok (Bryozoa) Shel'togo Morya. Trud. sov'mest. Kitaisk.-Sovyet. mor. biolog. Eksped. 3 [1960?]: 41-70 3 pls. [Chinese and Russian.]
- Anichini, C.** Risultati dei prima dodici mesi delle ricerche planctonologiche eseguite dall' Istituto di Zoologia di Cagliari nell' Anno Geofisico Internazionale. Boll. Zool. 26 (2) 1959: 669-682 9 figs. 2 tables.
- Astrova, G. G. (1).** O rodstvennikh svyazyakh i sistematicheskoy polozenii nekotorikh grupp mahanok iz otryada Trepotomata. [On the phyletic relations and systematical position of some groups of Bryozoa of the order Trepotomata]. Paleont. Zhurnal 1959 1: 15-24 3 text-figs.
- Astrova, G. G. (2).** Remarks on the M. K. Elias and G. E. Condra's book "Fenestella from the Permian of West Texas." Paleont. Zhurnal 1960 3: 141-146 2 text-figs.
- Austin, A. P.** *see* Ryland, J. S.
- Ax, P.** Die Entdeckung neuer Organisations-typen im Tierreich. Wittenberg Lutherstadt (A. Ziemsen Verlag) 1960: 116 pp., text illust.
- Balavoine, P.** Bryozoaires du Lutétien de Bois-Gouët (Loire-Atlantique). Bull. Soc. géol. Fr. (7) 1 3 1960: 245-251 2 pls.
- Balavoine, P.** *see* Furon, R.
- Baranova, G. I.** Nekotorie Rannepermiskie Mahanki Basseina r. Pechorui. [Some early Permian Bryozoa of the Pechora river basin.] Paleont. Zhurnal 1960 1: 62-72 2 pls.
- Barbosa, M. M.** Duas novas oclorrências de briozoários fósseis no Brasil. Arg. Acad. bras. Cienc. 31 4 Res. das Comun. 1960: XLIX.
- Bataller, J. R.** Enumeración de las especies nuevas del Eocénico de España. An. Esc. Perit. agric. Barcelona 13 1955: 3-50.
- Belloe, G.** Catalogue des types de Bryozoaires du Musée océanographique de Monaco. Bull. Inst. océanogr. Monaco No. 1177 1960: 1-16.
- Boardman, R. S. (1).** Trepotomatous Bryozoa of the Hamilton Group of New York State. Prof. Pap. U.S. geol. Surv. 340 1960: 1-87 22 pls. 27 text-figs.
- Boardman, R. S. (2).** A revision of the Ordovician Bryozoan genera *Batostoma*, *Anaphragma*, and *Amplexopora*. Smithsonian. misc. Coll. 140 5 1960: 1-28 7 pls.
- Bobin, G. & Prenant, M.** *Electra verticillata* (Ellis et Solander 1786) Lamouroux 1816, (Bryozoaire Chilostome). Cah. Biol. mar. 1 1960: 121-156 1 pl. 11 text-figs.
- Bock, K. J.** Biologische Untersuchungen, insbesondere Ciliatenfauna, in der durch Abwässer belasteten Schlei (westliche Ostsee). Kiel. Meeresforsch. 16 1960: 57-68 (Polyzoa pp. 60-61).
- Boda, J.** A Magyarországi szarmata emelet és Gerinctelen faunája. Mitt. Jb. ung. geol. Reichanst. (Anst.) 47 3 1959: 569-582 44 pls. [With German translation.]
- Bolton, T. E.** Catalogue of type invertebrate fossils of the Geological Survey of Canada: 1-215, Ottawa, 1960.
- Brien, P. (1).** L'Origine des Espèces—le Transformisme. Influence darwinienne en Belgique. Ann. Soc. roy. Zool. belg. 90 1960 fasc. 1: 41-69.
- Brien, P. (2).** Le bourgeonnement et la phylogénèse des Endoproctes et des Ectoproctes. Réflexions sur les processus de l'évolution animale. Bull. Acad. Belg. Cl. Sci. (5) 46 9 1960: 748-766.

- Brien, P. (3). Classe des Bryozoaires. In Grassé, P.-P., *Traité de Zoologie: Anatomie, Systématique, Biologie*. Tome 5 Fasc. 2. Paris (Masson & Cie) 1960: 1053bis-1335 figs. 876-1223.
- Buge, E. (1). Stratigraphie des dépôts miocènes et pliocènes de l'ouest de la France. C.R. Congr. Soc. Sav. No. 83 1958: 105-110. [See also Buge and others, *ibid.* p. 329.]
- Buge, E. (2). *Paleont. Univers.* 144 and 176 1950. [Not seen.]
- Buge, E. (3). Bryozoaires fossiles. In Grassé, P.-P., *Traité de Zoologie: Anatomie, Systématique, Biologie*. Tome 5 fasc. 2. Paris (Masson et Cie) 1960: 1336-1379 figs. 1224-1269.
- Burckle, L. H. Some Mississippian fenestrate Bryozoa from Central Utah. *J. Paleont.* 34 6 1960: 1077-1098 5 pls.
- Burdon-Jones, C. & Tams-Lyche, H. Observations on the Fauna of the North Brattholmen Stone-Coral Reef near Bergen. *Univ. Bergen Arb. Mat.-Nat. Ser.* 1960 4 1960: 1-24.
- Caria, I. C. Macrofauna e stratigrafia del Miocene della zona di Cagliari. *Boll. Soc. geol. ital.* 78 1 1960: 3-36 9 pls.
- Caspers, H. Der tierische Bewuchs an Helgoländer Seetonnen. *Helgoländer wissenschaft. Meeresuntersuch Bd. 4 Hft. 2* 1952. [Not seen.]
- Cavet, P. Le Paléozoïque de la zone axiale des Pyrénées Orientales Françaises entre le Roussillon et L'Andorre (étude stratigraphique et paléontologique). *Bull. Carte géol. Fr.* 55 254 1959: 1-216 [303-518] 9 pls. 36 text-figs.
- Cayeux, L. Le niveau inférieur du Cénomanien de Saint-Jouin et ses fossiles géants. *Bull. Soc. géol. Normandie* 48 1958: 11-12.
- Cheetham, A. H. (1). Time, Migration, and Continental Drift. *Bull. Amer. Ass. Petrol. Geol.* 44 2 1960: 244-251 4 text-figs.
- Cheetham, A. (2). *Rimosocella*, new genus of Cheilostome Bryozoa. *Micropaleontology* 6 3 1960: 287-289 5 text-figs.
- Coe, W. R. & Allen, W. E. Growth of sedentary marine organisms on experimental blocks and plates for nine successive years. *Bull. Scripps Inst. Oceanogr. Techn. ser.* 4 4 1937.
- Cognetti, G. & Santarelli, M. Ricerche sulle zoocenosi bentoniche del Golfo di Napoli. II. La cosiddetta secca di San Giovanni a Teduccio. *Bull. Pesca Piscic. Idrobiol.* 35 (N.S. 14) (1) 1959 [1960]: 10-20 2 figs.
- Condra, G. E. *see* Elias, M. K.
- Crespin, I. Catalogue of type and figured specimens in the Commonwealth Palaeontological Collection, Canberra. *Rep. Aust. Bur. Min. Res. Geol. Geophys.* 54 1960: 1-92.
- Crisp, D. J. & Ryland, J. S. Influence of Filming and of Surface Texture on the Settlement of Marine Organisms. *Nature Lond.* 185 4706 1960: 119.
- Crisp, D. J. & Williams, G. B. Effect of Extracts from Fucoids in promoting Settlement of Epiphytic Polyzoa. *Nature Lond.* 188 4757 1960: 1206-1207.
- Curry, D. Eocene Limestones to the West of Jersey. *Geol. Mag.* 97 4 1960: 289-298.
- Dieni, I. Nuovi lembi di tirreniano sulla costa orientale della Sardegna. *Atti Ist. Veneto Cl. Sci. mat. nat.* 118 1960: 181-189 2 pls. 1 text-fig.
- Dreyfuss, M. *see* Cavet, P. p. 131 [433].
- Ducasse, J. & Vigneaux, M. *Dimorphomicropora*: nouveau genre de Bryozoaire cheilostome du Maestrichtien du bassin aquitain. *C.R. Soc. géol. Fr.* 1960 6: 155-157 4 text-figs.
- Dunaeva, N. N. Novuie mshanki roda *Rhombotrypella* iz Verkhnegho Karbona Donetzkogho Basseina. [New Bryozoa species of the genus *Rhombotrypella* from the Upper Carboniferous of the Donetz basin.] *Paleont. Zhurnal* 1960 2: 44-51 2 pls. 4 text-figs.
- Ehrenberg, K. *Paläozoologie*: 1-408, figs. Wien 1960. [Polyzoa pp. 51-53.]
- Elias, M. K. & Condra, G. E. Proposed use of the Plenary powers to designate a type-species for the nominal genus *Fenestella* Lonsdale, 1839 (Class Bryozoa) in harmony with accustomed usage. *Z.N.(S.)* 154. *Bull. zool. Nom.* 17 (9-11) 1960: 294-300.
- Erben, H. K., Lardoux, H., Lys, M., Pillet, J., Serre, B., Ubaghs, G. & Walliser, O. H. Note préliminaire sur la faune des calcaires de la Grange (M.-et-L.). *Bull. Soc. Etud. sci. Angers N.S.* 2 1960: 100-104.
- Furon, R. & Balavoine, P. Les Bryozoaires aquitains de Qom (Iran). *Bull. Soc. géol. Fr.* (7) 1 3 1960: 294-303 2 pl.
- Galliford, A. L. Notes on the Microscopic Fauna and Flora of the Leeds-Liverpool Canal in South-west Lancashire. *Proc. Lpool Nats' Fld Cl. No.* 99 1960: 23-28.
- Gautier, Y. V. Bryozoaires de la Lagune de Venise. *Boll. Mus. Civ. St. nat. Venezia* 11 [1960]: 103-108.
- Grant, U. S., IV *see* Hertlein, L. G.
- Grassé, P.-P. *see* Brien, P. and Buge, E.
- Gurney, R. The fresh-water Crustacea of Norfolk. *Trans. Norfolk Norw. Nat. Soc.* 12 5 1929: 550-581. [Polyzoa pp. 564, 570.]
- Hastings, A. B. Proposal to place the generic name *Neocenthyris* Bretnall, 1921 (Phylum Polyzoa) on the Official List of Generic Names in Zoology. *Z.N.(S.)* 1314. *Bull. zool. Nom.* 17 (6-8) 1960: 244-245.
- Hattia, D. E. *see* Perry, T. G.
- Hertlein, L. G. & Grant, U. S., IV. The geology and paleontology of the Marine Pliocene of San Diego, California. *Mem. San Diego Soc. nat. Hist.* 2 2a 1960: 71-133 8 pls.
- Hoc, S. Das Moostierchen *Cristatella mucedo*. *Mikrokosmos* 49 9 1960: 269-271 1 text-fig.
- Hunter, W. R. & Hunter, M. R. A note on *Plumatella* and *Ancylus* in a mountain Lochan. *Glasg. Nat.* 17 5 1956: 241-242.
- Iizima, H. *see* Kawahara, T.
- Jacob, K. & Sastri, V. V. Miocene Foraminifera from Chavara, near Quilon, Travancore. *Rec. Geol. Surv. India* 82 2 1953: 342-353 3 pls. [Polyzoa pl. 14.]
- Kataoka, J. Bryozoa from Mogami-Tai, Japan Sea. *Sci. Rep. Tohoku Univ. Geol. Spec. vol.* 4 1960: 393-399 1 pl. 1 text-fig. 1 table.
- Kawahara, T. (1). Analysis of ecological phenomena in the community of sessile organisms. (1) Extinction of *Bugula neritina* Linné and *Styela plicata* (Lesueur) from the community. *Rep. Fac. Fish. Univ. Mie* 3 (3) 1960: 565-572 3 text-figs. 1 pl.
- Kawahara, T. (2). Analysis of ecological phenomena in the community of sessile organisms. (2) Growth, maturation and propagation in *Bugula neritina* Linné. *Rep. Fac. Fish. Univ. Mie* 3 (3) 1960: 573-581 3 text-figs.

- Kawahara, T. & Izima, H.** On the constitution of marine fouling communities at various depths in Ago Bay. Rep. Fac. Fish. Univ. Mie 3 (3) 1960: 582-594 6 text-figs.
- Kerns, A.** Contribution à l'étude faunistique et écologique des herbiers de Posidonies de la région de Banyuls. Vie et Milieu 11 2 1960: 145-187 15 text-figs.
- Knox, J.** Přispěvek k poznání variability statoblastů mechovky *Pectinatella magnifica* Leidy (Phylactolaemata, Cristatellidae). Sborn. Kl. Přírod. Brně 32 1960: 77-80. [German summary.]
- Kolosvári, G. & Abricossow, G. G.** Finding a representative of the class Kamptozoa in fresh waters of Hungary. Zool. Zh. 39 (11) 1960: 1735-1737 3 figs. [English summary.]
- Kruffy, J. F. N. van der** see Noorthoorn van der Kruffy, J. F.
- Küpper, H. (1).** Carl August Bobies†. Verh. geol. Bundesanst. 1 1959: 1-3.
- Küpper, H. (2).** Carl August Bobies. Mitt. geol. Ges. Wien 51 (1958) 1960: 363-364 portrait.
- Lagaaij, R.** see Noorthoorn van der Kruffy, J. F.
- Larwood, G. P.** see Thomas, H. D.
- Laughbaum, L. R.** A paleoecologic study of the Upper Denton formation, Tarrant, Denton, and Cooke Counties, Texas. J. Paleont. 34 6 1960: 1183-1197 3 text-figs.
- Lutaud, G.** Application de la Microcinématographie à l'Étude de la Croissance et du Bourgeonnement chez les Bryozoaires Chilostomes. Research Film 3 4 1959: 193-196 6 text-figs.
- Lynch, W. F.** Problems of the mechanism involved in the metamorphosis of *Bugula* and *Amaroecium* larvae. Proc. Iowa Acad. Sci. 67 1960: 522-531.
- Markowski, S.** Observations on the response of some benthonic organisms to power station cooling water. J. Anim. Ecol. 29 (2) 1960: 349-357 2 text-figs.
- Martin, G. B.** A preliminary investigation of the Upper Ordovician Bryozoa of Northwestern Alabama. Trans. Gulf Coast Assoc. geol. Soc. 10 1960: 201-205 4 text-figs.
- Matricón, I.** Etude histologique d'*Alcyonidium polyoum* (Hassall). Caractères structuraux spécifiques d'*Alcyonidium mytili* Dalzell (Bryozoaires Ctenostomes). Cah. Biol. mar. 1 4 1960: 359-395 16 text-figs.
- Matthews, W. H.** Texas fossils: An amateur Collector's Handbook. Guidebook Univ. Tex. Bur. econ. geol. 2 1960: 1-123 figs.
- Morozova, I. P.** Devonskie mshanki Minusinskikh i Kuznetskoi Kotlobin. Trav. Paléont. Inst. Acad. Sci. U.R.S.S. 86 1960: 1-207 34 pls. 30 text-figs.
- Nekhoroshev, V. P.** Polyzoa of the coal of the N.E. Baltic region. Acc. Sci. Kazakh S.S.R. Alma-ata, 1948. [Not seen.]
- Nicol, J. A. C.** The biology of marine animals. London (Sir Isaac Pitman & Sons Ltd.) 1960: xi, 707 pp, text illust.
- Noorthoorn van der Kruffy, J. F. & Lagaaij, R.** Displaced faunas from inshore sediments in the Haringvliet, (Netherlands). Geol. en Mijnbouw 39 1960: 711-723 6 text-figs.
- Numakurai, T.** An observation on the budding of the stolon of a bryozoan, *Bugula neritina* Linné. Bull. Mar. biol. Sta. Asamushi 10 2 1960: 99-101 10 figs.
- Oda, S.** Relation between sexual and asexual reproduction in freshwater Bryozoa. Bull. Mar. biol. Sta. Asamushi 10 2 1960: 111-116 4 text-figs.
- O'Donoghue, C. H. & Wattville, D. de.** The fishery grounds near Alexandria. XX. Bryozoa. Notes Mém. Fouad I Inst. Hydrobiol. No. 34 1939: 1-58 2 fig. 10 chart. [Title only Z.R. 96.]
- Owen, D. E.** Upper Silurian Bryozoa from Central Wales. Palaeontology 3 1 1960: 69-74 1 pl. 8 text-figs.
- Perry, T. G.** Fossils: Prehistoric Animals in Hoosier Rocks. Indiana Dept. Conserv., Geol. Surv. Circular 7 1959: 1-83 19 text-figs.
- Perry, T. G.** see Utgaard, G.
- Perry, T. G. & Hattin, D. E.** Osgood (Niagaran) bryozoans from the type area. J. Paleont. 34 4 1960: 695-710 6 pls.
- Perry, T. G. & Rodriguez, J.** Lectotype of *Anisotrypa symmetrica* Ulrich. J. Paleont. 34 2 1960: 277-279 1 pl.
- Pestana, H. R.** Fossils from the Johnson Spring formation, Middle Ordovician, Independence Quadrangle, California. J. Paleont. 34 5 1960: 862-873 4 pls. 1 text-fig. [Polyzoa pp. 870-871.]
- Phillips, J. R. P.** Restudy of types of seven Ordovician Bifoliate Bryozoa. Palaeontology 3 1 1960: 1-25 10 pls. 2 text-figs.
- Phillips, J. R. P.** see Ross, J. R. P. & Ross, J. P.
- Pinto, J. dos S.** Contribuição para o estudo do Zooplankton marinho da Guiné Portuguesa. Bol. Cult. Guiné portug. 8 29 1953: 1-16 8 pls.
- Poljak, J.** O naslagama titona i njihovoj fauni s područja Velike Kapele u Hrvatskoj. Vjestnik Hrvatskog Dravnog Geološkog Zavoda i Muzeja Zagreb 2-3 1944: 281-340 5 pls. 2 text-figs. [German summary.]
- Prenant, M.** see Bobin, G.
- Prud'homme, J.** Le genre *Amphiblestrella*, nouveau genre de Bryozoaires cheilostomes. C.R. Soc. géol. Fr. 1960 9: 243.
- Ragg, M.** Schiffsbodenfarben und Schiffs-Anstrichmittel. 1955 Berlin-Wilmersdorf. [Not seen.]
- Ravikovich, A. I.** New species of *Polypora* McCoy and *Phyllopora* King from the Lower Permian of the Northern Urals. Uchen. Zap. Moscow State Pedagogical Inst. 52 1948. [Not seen.]
- Reguant, S.** Nota sobre dos Briozoos del Mioceno de la provincia de Tarragona. Notas Inst. geol. Esp. 57 1960: 127-134 2 text-figs.
- Rodriguez, J.** see Perry, T. G.
- Rogick, M. D. (1).** Studies on Marine Bryozoa. XIII. Two new genera and new species from Antarctica. Biol. Bull. 119 3 1960: 479-493 3 pls.
- Rogick, M. D. (2).** Review of M. Prenant & G. Bobin, Faune de France. 60, Bryozoaires. Part I. Science 126 no. 3268 1957: 311.
- Ross, J. R. P. P. (1).** Type species of *Ptilodictya*—*Ptilodictya lanceolata* (Goldfuss). J. Paleont. 34 3 1960: 440-446 2 pls. 1 text-fig.
- Ross, J. P. (2).** Re-evaluation of the type species of *Arthropora* Ulrich. J. Paleont. 34 5 1960: 859-861 1 pl.
- Ross, J. P. (3).** Larger cryptostome Bryozoa of the Ordovician and Silurian, Anticosti Island, Canada—Part 1. J. Paleont. 34 6 1960: 1057-1076 4 pls.

Rouvillois, A. Le Thanétien du Bassin de Paris. (Étude hydrogéologique et micropaléontologique). Mém. Mus. Hist. nat. Paris N.S. 80 1960 : 1-155 8 pls. 17 text-figs. [Polyzoa pp. 42, 79.]

Ryland, J. S. (1). Experiments on the influence of light on the behaviour of polyzoan larvae. J. Exp. Biol. 37 4 1960 : 783-800 4 text-figs.

Ryland, J. S. (2). The British species of *Bugula* (Polyzoa). Proc. zool. Soc. Lond. 134 (1) 1960 : 65-105 3 pls. 15 text-figs.

Ryland, J. S. see Crisp, D. J.

Ryland, J. S. & Austin, A. P. Three species of Kamptozoa new to Britain. Proc. zool. Soc. Lond. 133 3 1960 : 423-433 3 text-figs. 1 pl.

Sakagami, S. (1). *Nipponostenopora*, a New Carboniferous Bryozoan Genus from Fukui, Hida Massif, Japan. Jap. J. Geol. Geogr. 31 1 1960 : 9-11 1 pl. 2 text-figs.

Sakagami, S. (2). *Hayasakapora*, a New Permian Bryozoan Genus from Iwaizaki, Miyagi Prefecture, Japan. Trans. palaeont. Soc. Japan 39 1960 : 321-323 1 pl.

Santarelli, M. see Cognetti, G.

Sastri, V. V. see Jacob, K.

Schneider, D. Über den Mechanismus des phototropischen Knospenwachstums bei marinen Bryozoen. Verh. dtsh. zool. Ges. 1959 (1960) : 238-247 9 text-figs.

Shcherbatnikh, T. I. see Staherbatykh, T. I.

Shishova, N. A. Novnye Permskie mshanki Zapadnogo Zabaikal'ya. [New Permian Bryozoa of the Western Transbaikalia.] Paleont. Zhurnal 1960 1 : 73-83 2 pls.

Skerman, T. M. (1). The recent Establishment of the polyzoan, *Watersipora cucullata* (Busk), in Auckland Harbour, New Zealand. N.Z.J.Sci. 3 4 1960 : 615-619 1 text-fig.

Skerman, T. M. (2). Ship fouling in New Zealand waters: A survey of marine fouling organisms from vessels of the coastal and overseas trades. N.Z.J.Sci. 3 4 1960 : 620-648 7 figs.

Sládečková, A. & Sládeček, V. Das Frühlingsplankton einiger Talsperren in Ostböhmen. Sborn. Vys. Škol. Chem.-Tech. Praha 4 1 1960 : 487-510. [Czech with Russian and German summaries.]

Soule, J. D. The Distribution and Affinities of the Littoral Marine Bryozoa (Ectoprocta). Syst. Zool. 9 1960 : 100-104.

Soule, J. D. in Hertlein, L. G. & Grant, U. S.

Staherbatykh, T. I. Novnye vidy Kamennougol'nykh mshanok raiona Kurskoi magnetnoi anomalii. [New species of Carboniferous Bryozoa in the district of the Kursk magnetic anomaly.] Paleont. Zhurnal 1960 2 : 52-57 1 pl.

Tambr-Lyche, H. see Burdon-Jones, C.

Termier, H. & G. Paléontologie stratigraphique : 1-515 figs. Paris 1960.

Thomas, H. D. & Larwood, G. P. The Cretaceous Species of *Pyripora* d'Orbigny and *Rhammatopora* Lang. Paleontology 3 3 1960 : 370-386 3 pls. 4 text-figs.

Trisna, V. B. Permian Polyzoa from the River Silva. Tr. Oil Scientific Investigations 31 1948 Geol. new series. Not seen.]

Tulkki, P. Studies on the bottom fauna of the Finnish southwestern archipelago. I. Bottom fauna of the Airisto Sound. Ann. Soc. zool.-bot. fenn. Vanamo 21 (3) 1960 : 1-26 18 text-figs. [Finnish summary.]

Uitgaard, J. & Perry, T. G. Fenestrate Bryozoans from the Glen Dean Limestone (Middle Chester) of Southern Indiana. Bull. geol. Surv. Indiana 19 1960 : 1-32 6 pls. 12 text-figs.

Valkanov, A. Katalog unserer Schwarzmeerfauna. Trud. Morsk. biol. Sta. G. Varna, Sofia 19 1957 : 1-62.

Vigneaux, M. see Ducasse, J.

Voigt, E. (1). Sur les différents stades de l'astogénèse de certains Bryozoaires cheilostomes. Bull. Soc. géol. Fr. (7) 1 7 1960 : 697-704 2 pls. [Included in Z.R. 96 with wrong date for publication.]

Voigt, E. (2). Zur Frage der Stratigraphischen Selbständigkeit der Danienstufe. Rep. Int. Geol. Cong. Copenhagen 21 5 1960 : 199-209. [German with English abstract.]

Voigt, E. (3). Revision der von F. v. Hagenow 1839-1850 aus der Schreibkreide von Rügen veröffentlichten Bryozoen. Geologie 8 beihft 25 1959 : 1-80 10 pls. 7 text-figs.

Voigt, E. (4). Bryozoen und andere benthonische Kleinfossilien aus den Liechtensteiner Kreideflysch. Abh. dtsh. Akad. Wiss. Berlin Kl. III 1 1960 : 225-234 1 pl.

Wiesemann, G. Polyester-Steinkerne der Gattung *Beisselina* Canu 1913 (Bryoz. foss.). Mitt. geol. (St.) Inst. Hamb. 29 1960 : 101-103 1 pl.

Williams, G. B. see Crisp, D. J.

Yang, K. C. The early Middle Devonian Bryozoans from Wutsun Shale, Kwangsi. Acta palaeont. Sinica 2 2 1954 : 207-226 3 pls. [Chinese with English summary.]

II. SUBJECT INDEX

GENERAL

Obituary notices.—C. A. Bobies, Küpper (1, 2).

Reviews.—Of Elias & Condra on *Fenestella*, *Astrova* (2); of Prenant & Bobin, Faune de France, I, Rogick (2).

Handbooks and Textbooks.—Of aberrant organisms, Ax; of Fossil Bryozoa, Buge (3); Phylactolaemata, Ctenostomata, Cyclostomata, Brien (3); of Palaeozoology, Ehrenberg; Texas fossils, Matthews; biology of marine animals, Nicol; introductory pamphlet, Perry; stratigraphic sequence, Termier & Termier.

Fauna List.—Black Sea, Valkanov.

Catalogues of type-specimens.—Belloc; Bolton; Crespin.

Nomenclature.—Proposal to designate type-species of *Fenestella* Lonsdale, Elias & Condra; proposal to put *Neoeuthyris* on official list, Hastings.

Classification.—Grouping of some Cryptostomata, Phillips.

Terminology.—Boardman (1), p. 21.

Revisions and redescrptions.—Ross (1, 2); Phillips; revision of von Hagenow (1839-50) Cretaceous Polyzoa from Rügen, Voigt (3); lectotype and lectoparatype chosen, Perry & Rodriguez; list of *nomen nudum* published by von Hagenow, Voigt (3); catalogue of species first described from Eocene of Spain, Bataller.

Technique.—Internal casts of zoecia made with polyester, Wiesemann; sectioning, Hoc.

Stratigraphy.—Cretaceous Denmark, Voigt (2); Miocene and Pliocene of western France, Buge.

Phylogeny and evolution.—Brien (1, 2); some families of Trepostomata, Astrova (1).

Morphology.—Of Trepostomata, Boardman (1); of some Cryptostomata, Phillips; skeletal structure of some Cryptostomata, Ross (3); anatomy of *Electra verticillata*, Bobin & Prenant; anatomy of *Cristatella*, Hoc.

Histology.—Histological specific characters in *Alcyonidium polyourum* and *A. mytili*, Matricón.

Variation.—Of statoblasts, Knox.

Reproduction and growth.—Budding, Brien (1, 2); cinematographic study of budding in *Membranipora*, Lutand [for fuller account see Z.R. 96]; problems of mechanism involved in metamorphosis, Lynch; relation between sexual and asexual reproduction, Oda; budding in *Loxosomella*, swimming phase of buds, Ryland & Austin; mechanism of phototropic growth, Schneider; life-history of *Bugula neritina*, Kawahara (2); budding of stolon of *B. neritina*, Numakunai.

Distribution.—Transported marine specimens in inshore estuarine sediments of Rhine/Maas delta, Noorthoorn & Lagaaij; theories of transatlantic migration discussed and tested by consideration of distribution of early Tertiary Polyzoa, Cheetham (1); distribution and affinities of Polyzoa of waters around Baja California, Soule.

Palaeo-ecology.—N. Texas, Laughbaum.

Ecology.—Relation between stolonial network *Electra verticillata* and sandy substratum, Bobin & Prenant; comparison of population of two facies at same level, Cognetti & Santarelli; over-wintering by stolons, Numakunai; annual cycle in power-station cooling-water, Markowski; fauna of Norwegian coral-reef, Burdon-Jones & Tams-Lyche; method of analysing extinction of species from a sessile community, Kawahara (1); mediterranean animals in a warm-water British dock, Ryland & Austin p. 427; spring plankton in Bohemian reservoirs, Sládečková & Sládeček; Polyzoa in sewage-polluted fjord, Bock.

Settlement and behaviour of larvae.—Coe & Allen; Crisp & Ryland; Crisp & Williams; Ryland (1); Ryland & Austin; seasonal distribution of Polyzoan larvae (undetermined), table 1, Anichini.

Fouling.—Caspers; Coe & Allen; Kawahara (1, 2); Kawahara & Iizima; Ragg; on ships in New Zealand waters, Skerman (1, 2).

DISTRIBUTION

(a) RECENT

Marine and Brackish.—Norway, Burdon-Jones & Tams-Lyche; Finland, Tulki; Baltic, Bock; England, Gurney; Ryland (2); Ryland & Austin; France, Bobin & Prenant; Mediterranean, Kerneis; O'Donoghue & Watteville; Ryland (2); Adriatic, Gautier; Japan, Numakunai; Sea of Japan, Kataoka; Yellow Sea, Androsova; Portuguese Guinea, Pinto; E. coast, U.S.A., Ryland (2); California, Coe & Allen; Antarctica, Rogick (1).

Freshwater.—Britain, Galliford; Hunter & Hunter; Czechoslovakia, Knox; Sládečková & Sládeček; Hungary, Kolosvári & Abricsov.

(b) FOSSIL

Quaternary.—Holland, Noorthoorn & Lagaaij; Sardinia, Dieni.

Miocene.—Hungary, Boda; Italy, Caria; Spain, Reguant; Iran, Furon & Balavoine; India, Jacob & Sastri; California, U.S.A., Hertlein & Grant.

Eocene.—W. English Channel, Curry; France, Balavoine; Rouvillois; Spain, Bataller; N. Carolina and Georgia, U.S.A., Cheetham (2).

Cretaceous.—Europe, Prud'homme; Thomas & Larwood; Denmark, Voigt (2); France, Cayeux; Ducas & Vigneaux; Germany, Voigt (3); Liechtenstein, Voigt (4); U.S.A., Prud'homme; Texas, U.S.A., Laughbaum; Thomas & Larwood; Brazil, Barbosa.

Jurassic.—Jugoslavia, Poljak.

Palaeozoic.—Indiana, U.S.A., Perry.

Permian.—Pechora River Basin, U.S.S.R., Baranova; N. Urals, U.S.S.R., Ravikovich; western Transbaikal, U.S.S.R., Shishova; River Silva, U.S.S.R., Trizna; Japan Sakagami (2).

Carboniferous.—Baltic Region, Nekhoroshev; Donetz Basin, U.S.S.R., Dunaeva; District of Kurak magnetic anomaly, U.S.S.R., Staherbatych; Japan, Sakagami (1); Utah, U.S.A., Burek; S. Indiana, U.S.A., Utgaard & Perry; Brazil, Barbosa.

Devonian.—France, Erben & others; Kuznetz region, U.S.S.R., Morozova; Kwangsi, China, Yang; New York State, U.S.A., Boardman (1).

Silurian.—N.E. Europe, Ross (1); Esthonia, Boardman; Wales, Britain, Owen; Anticosti Island, Canada, Ross (3); Ohio, U.S.A., Ross (2); Indiana, U.S.A., Perry & Hattin.

Ordovician.—France, Cavet; Anticosti Island, Canada, Ross (3); U.S.A., Boardman (2); Ohio, U.S.A., Ross (2); Alabama, U.S.A., Martin; California, U.S.A., Pestana.

III. SYSTEMATIC INDEX

ECTOPROCTA

GYMNOLAEMATA

Ctenostomata

Alcyonidium gelatinosum p. 1188, Brien (3).—*A. polyourum*, *mytili* p. 359, Matricón.

Bowerbankia p. 1171 et seq., *pustulosa* p. 1178 et seq., Brien (3).

Cylindrocium dilatatum p. 1170, Brien (3).

Flustrella hispida p. 1187, Brien (3).

Monobryozoon ambulans p. 58, Ax.

Paludicella p. 1170 et seq., Brien (3).

Cyclostomata

†*Actinopora excavata*, Furon & Balavoine p. 296.

†*Althedata* p. 35, *belgebaschensis* p. 36, Morozova.

†*Berenicea disciformis* p. 32, *fistularis* p. 54, Voigt (3).

†*Bicavea? fungiformis* p. 51, Voigt (3).

†*Canalipora articulata* p. 37, Voigt (3).

†*Ceidmonea* sp. p. 229, Voigt (4).

†*Ceramopora vesicularis* sp. n., *imbricata*, Silurian Indiana, Perry & Hattin p. 699.

†*Ceramoporoidea* pp. 12, 34, Morozova.

†*Ceripora micropora* p. 34, *strangulata* p. 38, Voigt (3).

†*Cheilotrypa ostiolata*, Perry & Hattin p. 701.

†*Clinopora costulata* p. 48, Voigt (3).

†*Cystiramus* p. 45, *kondomensis* p. 46, Morozova.

†*Defrancia excavata* referred to *Actinopora*, Furon & Balavoine p. 296.

†*Diaperocia incrustata* p. 48, Voigt (3).

†*Diasopora congesta*, Boda pp. 646, 746.

†*Diplosolen pavonius* p. 33, Voigt (3).

†"*Discosparsa*" *rosula* p. 39, Voigt (3).

†*Entalophora iranensis* sp. n. for *Spiropora macropora* Gregory non d'Orbigny, p. 295, violacea sp. n. Miocene Iran, *E. proboscidea* p. 296, Furon & Balavoine.—*E. madreporacea* p. 35, proboscidea p. 48, Voigt (3).—*Entalophora* spp. pp. 228, 229, Voigt (4).

Entalophora watersi nom. n. for *E. rugosa* Waters and Calvet if not *E. rugosa* d'Orb. p. 10, O'Donoghue & Watteville.

†*Eofistulotrypa* p. 47, manifesta p. 50, Morozova.

†*Filicea velata* p. 38, Voigt (3).

†*Filisparsa dartevillei* sp. n. Miocene Iran, Furon & Balavoine p. 296.

†*Fistulipora fibrata* sp. n. Permian U.S.S.R., Baranova p. 62.—*F. promiscua* sp. n. Silurian Indiana, Perry & Hattin p. 700.—*F. tschuensis* and *bidentata* both = *Alt-schedata belgebachensis* p. 36, karzevae p. 37, galinae sp. n. p. 38, indigena sp. n. p. 39, vassinenis sp. n. p. 40, Devonian U.S.S.R., Morozova.—*F. umbrosa* sp. n. p. 69, stravi sp. n. p. 70, Silurian Britain, Owen.—*F. kwangsiensis* sp. n. pp. 209, 218, irregularis, hemisphaeroides spp. n. pp. 210, 219, yungchunensis sp. n. pp. 211, 220, lamellosa, ovata spp. n. pp. 212, 221, chaoi sp. n. pp. 213, 222, Devonian China, Yang.

†*Fistuliramus* p. 40, intermedius p. 41, varians p. 42, mishanensis p. 43, changi p. 44, Morozova.

†*Hederella* p. 33, minusinensis p. 34, Morozova.

†*Hemicellaria langethali* p. 34, Voigt (3).

†*Heterocrisina* cf. *carinata* p. 229, Voigt (4).

†*Heteropora* sp. p. 230, Voigt (4).

†*Homoecolen ramulosus* p. 48, Voigt (3).

†*Idmonea rostrigera* sp. n. Eocene France, Balavoine p. 246.—*I. parasitica* pp. 39, 50, *Idmonea*? *gracilis* p. 50, Voigt (3).—*Idmonea* sp. p. 229, Voigt (4).

†*Lichenopora orientalis* sp. n. Miocene Iran, Furon & Balavoine p. 297.—*L. diadema* p. 39, costata p. 50, Voigt (3).

†*Meliceritites roemeri* pp. 35, 38, Voigt (3).—*Meliceritites* sp. p. 230, Voigt (4).

†*Monticulipora*? *marylandensis* a synonym of *Leptotrypella* (*Leptotrypella*) *amplectens* [Trepotomata] p. 60, Boardman (1).—*M. parasitica*, Perry p. 33.

†*Osculipora truncata* pp. 34, 50, Voigt (3).

†*Petalopora reticulata* p. 35, marssoni pp. 35, 36, Voigt (3).

†*Proboscina* sp. and *P. truncata* p. 32, Voigt (3).

†*Radiocavea diadema*, Furon & Balavoine p. 297.

†*Radiotubigera orientalis* sp. n. Miocene Iran, Furon & Balavoine p. 297.

†*Reptariidae* pp. 12, 33, Morozova.

†*Reteporidea cancellata* p. 34, Voigt (3).

†*Reticulipora* spp., *Gorgonia sagena*, *gemmata* = ? *Reticulipora*, *G. carinata* = *Reticulipora* sp. p. 8, Voigt (3).

†*Spiropora verticillata* p. 37, Voigt (3), and p. 229, Voigt (4).—*S. macropora* = *Entalophora iranensis*, Furon & Balavoine p. 296.

†*Stomatopora* sp. p. 33, media, ramosa p. 41, Voigt (3).

†*Sulcovaca cristata* p. 36, Voigt (3).

†*Tuberculipora* ("Idmonea") *subcompressa* p. 36, Voigt (3).

TREPOSTOMATA

†*Abakana macrospina* p. 114, Morozova.

†*Acanthotrypella* synonym of *Amplexopora* (not of *Batostoma*) p. 16, emended definition p. 17, Boardman (2).

†*Amplexopora* p. 16, emended definition p. 17, lists of species correctly referred to *Amplexopora* and transferred to *A. from Batostoma* p. 18, sepiosa p. 20, Boardman (2).

†*Amplexoporella* p. 70, ornamentata p. 71, Morozova.

†*Amplexoporidae* p. 68, Morozova.

†*Anaphragma* emended definition p. 11, comparison with *Batostoma* p. 12, mirabile p. 13, Boardman (2).

†*Anisotrypa symmetrica* lectotype and lectoparatypes chosen, Perry & Rodriguez pp. 278, 279.

†*Anomolotoechus* a synonym of *Stereotoechus*, *A. typicus* a synonym of *S. spiniferus*, *A. tuberatus* referred to *Atactotoechus*, p. 40, Boardman (1).—*Anomolotoechus* p. 58, grandis sp. n. Devonian U.S.S.R., gyaensis p. 59, Morozova.

†*Atactotoechid* group comprising *Atactotoechus*, *Loxophragma*, pp. 32, 69, Boardman (1).

†*Atactotoechidae* pp. 12, 52, Morozova.

†*Atactotoechus* p. 69, acritus sp. n. p. 72, cartus sp. n. cartus subsp. cartus subsp. n. p. 73, cartus subsp. pilatus subsp. n., parallelus sp. n. p. 74, hystericus sp. n. p. 75, fruticosus p. 76, Devonian U.S.A., Boardman (1).—*A. belskaya* p. 61, Morozova.

†*Batostoma* emended definition p. 5, implicatum p. 7, B. billingsi, chapparsi, conferta, ?decipiens, elongata, minnesotense, variabile, winchelli var. spinulosum transferred to *Amplexopora* p. 18, Boardman (2).—*B. sibirica* referred to *Neotrematopora* p. 112, Morozova.

†*Batostomella stenoporoides* sp. n. Permian U.S.S.R., Baranova p. 63.—*B. tschuensis* referred to *Pseudobatostomella* p. 104, Morozova.

†*Calacanthopora* p. 43, C.? *senticosus* sp. n., Devonian U.S.A. p. 44, Boardman (1).

†*Cyphotrypa traversensis* referred to *Stereotoechus* p. 40, expanda referred to *Trachytoechus* p. 49, unica referred to *Leptotrypella* p. 51, Boardman (1).—*C. osgoodensis* sp. n. Silurian Indiana, Perry & Hattin p. 703.—*C. definita* p. 57, Morozova.

†*Dekayella megacanthopora* sp. n. p. 71, ramosa sp. n. p. 72, Silurian Britain, Owen.

†*Diplotrypa nummiformis*, Perry & Hattin p. 707.

†*Discotrypina* gen. n. (Amplexoporidae) p. 18 and legend text-fig. 2, *Astrova* (1). [Nom. nud.?]

†*Dyoidolophragma* char. emend. p. 41, polymorphum sp. n. Devonian U.S.A. p. 42, Boardman (1).

†*Eostenopora villosa* a synonym of *Trachytoechus typicus*, *E. primiformis* a synonym of *Trachytoechus romingeri* p. 49, Boardman (1).

†*Eridotrypa* sp. p. 132, Cavet.—*E. callosa* sp. n. Devonian U.S.S.R. p. 100, vassilievskiji referred to *Neotrematopora* p. 113, Morozova.—*E. sinensis* sp. n. Devonian China, pp. 214, 224, Yang.

†*Eridotrypella* sp. p. 50, *brevis* a synonym of *Leptotrypella ohioensis* p. 52, Boardman (1).—*Eridotrypella* p. 73, *ornata* sp. n. p. 75, *valentinae* sp. n. p. 76, *minuta* sp. n. p. 77, Devonian U.S.S.R., Morozova.

†*Eridotrypellidae* pp. 12, 72, Morozova.

†*Hallopora* sp. cf. *H. tolli*, Postana p. 870.—*H. ramosa*, Perry p. 33.—*H. elegantula*, Perry & Hattin p. 705.

†*Hennigopora apta* sp. n. Silurian Indiana, Perry & Hattin p. 704.

†*Heterotrypa frondosa*, Perry pp. 33, 34.—*Heterotrypa*? *perpleza* sp. n. Silurian Indiana, Perry & Hattin p. 702.

†*Heterotrypidae* pp. 12, 82, Morozova.

†*Leioclema* list of species rejected, *L. monroei* a synonym of *L. confertiporum* p. 45, *attenuatum* a synonym of *decipiens* p. 47, *clasmaticum* sp. n. Devonian U.S.A. p. 48, Boardman (1).—*L. explanatum* p. 72, Owen.

†*Leioclema* group comprising only *Leioclema*, pp. 30, 44, Boardman (1).

†*Leptotrypa tubuliformis* p. 53, Morozova.

†*Leptotrypella aperta* p. 55, *inaudita* sp. n. Devonian U.S.S.R. p. 56, Morozova.—*L. kwangsiensis* sp. n. Devonian China, pp. 214, 223, Yang.—*Leptotrypella* char. emend. subgen. *Leptotrypella* char. emend. p. 51, phylogeny, p. 52, *barrandi* p. 53, *mesostena* sp. n., *mesostena* subsp. *mesostena* subsp. n. p. 55, *multitecta* sp. n. p. 57, *asterica* sp. n. = *Chaetetes fruticosa* part p. 58, *furcata* p. 59, *amplectens* p. 60, *magnipora* sp. n. p. 61, Devonian U.S.A., Boardman (1).

†*Leptotrypella* (Pycnobasis) *amphelicta* sp. n. p. 63, *pachyphragma* sp. n. p. 64, *tuberala* sp. n. p. 65, Devonian U.S.A., Boardman (1).

†*Leptotrypellid* group comprising *Leptotrypella*, *Poly-cylindricus* pp. 32, 51, Boardman (1).

†*Lioclema* p. 82, *salariense*, *minussinense* spp. n. p. 84, *heitaense* p. 85, *yakovlevi* p. 87, *editum* sp. n. p. 88, *mirum*, *celebratum* spp. n. p. 89, *ivanovae* sp. n. p. 91, *rassinense*, *numerosum* spp. n. p. 92, Devonian U.S.S.R., Morozova.

†*Loxophragma* gen. n. (Atactoechid group) type-species *L. lechrium* p. 78, *L. leptum* sp. n. p. 79, *lechrium* sp. n. p. 80, Devonian U.S.A., Boardman (1).

†*Megacanthopora* p. 79, *granulosa* p. 81, Morozova.

†*Mesotrypella* gen. n. (Halloporidae) p. 17 and legend text-fig. 1, *Astrova* (1). [Nom. nud.?]

†*Minussina* gen. n. (Heterotrypidae) type-species *M. maculosa* sp. n. p. 105, *fruticosa* sp. n. p. 107, *spinosa* sp. n. p. 108, *grandis* sp. n. p. 109, Devonian U.S.S.R., Morozova.

†*Monotrypa flabellata* sp. n. Silurian Britain p. 72, *Favosites fibrilla* Smith a synonym of *M. crenulata* p. 73, Owen.—*M. osgoodensis* p. 707, *exserta* sp. n. Silurian Indiana, *benjamini* p. 708, Perry & Hattin.

†*Neotrematopora* gen. n. (Heterotrypidae) p. 110, type-species *N. typica* sp. n. Devonian U.S.S.R. p. 111, *sibirica* p. 112, *vassilievskiji* p. 113, Morozova.

†*Nipponostenopora* gen. n. (Stenoporidae) p. 9, type-species *N. elegantula* sp. n. Carboniferous Japan p. 10, Sakagami (1).

†*Paralioclema* gen. n. (Heterotrypidae) p. 93, type-species *P. ninae* sp. n. Devonian U.S.S.R. p. 94, *nodosum* sp. n. p. 95, *brevi*, *vulgatum* spp. n. p. 96, Devonian U.S.S.R., Morozova.

†*Polycylindricus* gen. n. (Leptotrypellid group) type-species *P. asphinctus* p. 67, *P. asphinctus, clausus* spp. n. p. 68, Devonian U.S.A., Boardman (1).

†*Prasopora* sp. p. 133, Cavet.

†*Pseudobatosomella* p. 102, *salariensis* sp. n. Devonian U.S.S.R. p. 103, *tschuensis* p. 104, Morozova.

†*Pycnobasis* subgen. of *Leptotrypella* p. 62, Boardman (1). [See *Leptotrypella* (Pycnobasis).]

†*Rhombotrypella grandis* sp. n. p. 45, *parvicellata* sp. n. p. 46, *hexagonalis* sp. n. p. 47, *bachmutica* sp. n. p. 48, *multiformis* sp. n. p. 49, *pulchra* sp. n. p. 50, Carboniferous U.S.S.R., Dunneva.

†*Shulgina nesterenkoae* p. 62, Morozova.

†*Stenopora incrustans* referred to *Trachytoechus* p. 49, Boardman (1).

†*Stenoporella devonica* referred to *Leptotrypella* p. 51, Boardman (1).

†*Stereotoechid* group comprising *Stereotoechus*, *Dyodophragma*, *Eostenopora*, *Calacanthopora* pp. 30, 40, Boardman (1).

†*Stereotoechus* p. 40, cf. *typicus* p. 41, Boardman (1).—*S.* p. 63, *ramosus* p. 64, *insuetus* p. 65, *bifolius* p. 67, Morozova.

†*Stigmatella dubia* sp. n. Silurian Indiana, Perry & Hattin p. 704.

†*Stromatotrypa* a synonym of *Batosoma* p. 6, Boardman (2).

†*Tabulipora paraborealis* sp. n. Permian U.S.S.R., Baranova p. 64.—*T. vishniakovi* sp. n. p. 52, *expressa* p. 53, Carboniferous U.S.S.R., Stashevsky.

†*Tabuliporella permiana* sp. n. Permian U.S.S.R., Baranova p. 65.

†*Trachytoechid* group comprising *Trachytoechus*, *Eridotrypella*, *Eridocampylus* pp. 31, 49, Boardman (1).

†*Trachytoechus* char. emend., *T. variacellus*, p. 49, Boardman (1).

†*Trematella macrospina* referred to *Abakana* p. 114, Morozova.

†*Trematopora* sp., Perry & Hattin p. 706.—*T. schirensis* referred to *Neotrematopora sibirica* p. 112, Morozova.

†*Trematoporidae* p. 97, Morozova.

CRYPTOSTOMATA

†*Archimedes macfarlani* p. 1088, *owenianus* p. 1089, Burckle.

†*Arthropora* Ulrich, lectotype of type-species (*A. shafferi*) chosen, synonym of *Graptodictya* Ulrich, Ross (2) p. 859.

†*Chasmatoporella* cf. *metzi* p. 134, Cavet.

†*Escharopora recta* p. 17, Phillips.

†*Escharoporida* group comprising *Escharopora recta*, *Graptodictya perelegans*, *elegantula*, *Stictoporella interstincta*, p. 17, Phillips.

†*Euridictya montifera* p. 12, Phillips.

†*Fenestella*, proposal to Internat. Comm. Zool. Nomencl. p. 294, Condra & Elias.—*F. regalis* p. 1079, *parallela*, *serratula* subsp. *humburgensis* subsp. n. p. 1080, *hamithensis* sp. n. p. 1081, *varinodosa*, *serratula* p. 1082, *toelensis*, *acarina* spp. n. p. 1083, *tenax* p. 1084, *utahensis* p. 1085, *disseminodaria* sp. n. p. 1086, Carboniferous U.S.A., Burckle.—*Fenestella* p. 116, *pioneri*, *buratinensis* p. 117, *vera* p. 118, *elongata* p. 119, *mirifica*, *altchedatensis* spp. n. p. 122, *subpioneri* sp. n. p. 123,

- Morozova.**—*F. cestrionensis*, Perry p. 33.—*F. sibirica* sp. n. p. 74, *fabalis* sp. n. p. 75, *baycalensis*, *gulyayensis* spp. n. p. 76, *stellifera* sp. n. p. 77, *annae*, *mergensis* spp. n. p. 78, *ruricapillare*, *involuta* spp. n. p. 79, Permian U.S.S.R., Shishova.—*F. burlingtonensis* p. 14, *cestrionensis* p. 15, *exigua* p. 19, *matheri* p. 20, *tenax* p. 21, Utgaard & Perry.—*Fenestella* sp. pp. 215, 225, Yang.
- †*Fenestella* (*Minilya*) *incipiens* sp. n. p. 1087, *crocodfordae* sp. n. p. 1088, Carboniferous U.S.A., Burckle.
- †*Fenestellidae* pp. 13, 116, Morozova.
- †*Fenestralia trifurcata* sp. n. Carboniferous U.S.A., *sancti-ludovici* p. 1090, Burckle.
- †*Graptodictya perelegans* p. 19, *elegantula* p. 21, Phillips.—*G. shafferi*, Ross (2) p. 859.
- †*Hayaakapora* gen. n. (Rhabdomesidae) p. 322, type-species *H. erectoradiata* sp. n. Permian Japan p. 323, Sakagami (2).
- †*Hemitrypa* p. 124, *devonica* varr. *altaica*, *heitaiensis* synonyms of *devonica* p. 125, *multiformis* sp. n. Devonian U.S.S.R. p. 127, Morozova.—*H. reticulata* sp. n. Carboniferous U.S.A. p. 1091, Burckle.—*H. carinata* sp. n. Permian U.S.S.R., Shishova p. 81.
- †*Lyrocladia mariae* sp. n. p. 80, *longifenestrata* sp. n. p. 81, Permian U.S.S.R., Shishova.
- †*Lyroporella divergens* p. 23, Utgaard & Perry.
- †*Minilya* see *Fenestella*.
- †*Nicklesopora acanthopora* sp. n. p. 54, *hispida* sp. n. p. 56, Carboniferous U.S.S.R., Stsherbatykh.
- †*Pachydictya crassa*, Perry & Hattin p. 709.—*P. robusta* p. 14, Phillips.
- †*Pachydictyid* group comprising *Pachydictya robusta* and probably *Trigonodictya conciliatrix* p. 13, Phillips.
- †*Phyllopora* spp. n., Ravikovich.
- †*Phylloporina hypnoides* p. 133, Cavet.
- †*Polypora* spp. n., Ravikovich.—*P. micronodosa* sp. n. p. 1092, *stansburyensis* sp. n. p. 1093, *cestrionensis*, *debilis* p. 1094, Carboniferous U.S.A., Burckle.—*P. belgebascensis* p. 135, *una* sp. n. Devonian U.S.S.R. p. 136, Morozova.—*P. radialisiformis* sp. n. Permian U.S.S.R., Shishova p. 82.—*P. corticosa* p. 24, *multispinosa* p. 26, *nodolinearis* p. 28, Utgaard & Perry.
- †*Ptilodictya gracile* sp. n. Silurian Britain p. 74, Owen.—*P. lanceolata* type-species of *Ptilodictya*, redescribed, Ross (1) p. 440.—*Ptilodictya* emended, *P. whiteavesi* = *canadensis* p. 1064, *denticulata* sp. n. Ordovician Canada p. 1066, *gladiola* = *tenisiformis* p. 1067, *sulcata* p. 1069, Ross (3).
- †*Ptylopora condrai* sp. n. p. 1095, *eliasi* sp. n. p. 1096, Carboniferous U.S.A., Burckle.
- †*Reteporidra* p. 136, *adnativiformis* p. 137, *stellata* p. 140, Morozova.
- †*Reteporina ubensis* p. 134, Morozova.
- †Rhabdomesidae p. 141, Morozova.
- †*Rhabdomeson parvus* sp. n. Carboniferous U.S.S.R. p. 53, Stsherbatykh.
- †*Rhinidictya* a synonym of *Stictopora* p. 7, Phillips.
- †*Rhombopora nikiforovae* sp. n. Permian U.S.S.R. p. 68, Baranova.—*R. hemiseptata* sp. n. p. 142, *mariae* p. 143, Devonian U.S.S.R., Morozova.—*R. minima* sp. n. Silurian Britain p. 73, Owen.
- †*Saffordotaxia multispinata* p. 144, Morozova.
- †*Semicoscium* p. 128, *striatum* p. 129, *angerlyki* p. 130, *buguunicum* synonym of *altshedaticum* p. 131, *kysilachnicum* synonym of *robustum* p. 132, *parvicarinatum* sp. n. Devonian U.S.S.R. p. 133, Morozova.
- †*Septopora philoporeoides* sp. n. Permian U.S.S.R. p. 66, Baranova.—*S. ulrichi* sp. n. Carboniferous U.S.A. p. 1097, Burckle.—*S. cestrionensis* p. 28, *subquadrans* p. 29, Utgaard & Perry.
- †*Stictopora* char. emend. *fenestrata* p. 7, *nicholsoni* p. 9, Phillips.
- †*Stictoporella* emended, *S. excellens* p. 1072, Ross (3).—*S. interstincta* p. 23, Phillips.
- †*Stictopodid* group comprising *Stictopora fenestrata*, *nicholsoni*, *Euridictya montifera* p. 6, Phillips.
- †*Streblascopora germana* p. 68, *multifistulata* sp. n. p. 69, *erecta* sp. n. p. 70, *pallula* sp. n. p. 71, Permian U.S.S.R., Baranova.
- †*Sulcoretopora spatiosa* sp. n. Carboniferous U.S.S.R. p. 56, Stsherbatykh.
- †*Thamnisus raribifurcatus* sp. n. Carboniferous U.S.A. p. 1095, Burckle.
- †*Trigonodictya conciliatrix* p. 16, Phillips.

CHEILOSTOMATA

- †*Acoscinopectura fallax* p. 47, Voigt (3).
- †*Adenifera inarmata*, Balavoine p. 246.
- †*Aechmella pavonia*, *seriata* p. 17, *anglica*, *biconveza* p. 18, *Aechmella* sp. p. 31, Voigt (3).
- †*Amphiblastrella* gen. n. Cretaceous Europe and U.S.A., Prud'homme p. 243. [Nom. nud.]
- †*Amphiblestrum ringens* p. 31, Voigt (3).
- †*Balanostoma marsupium* pp. 23, 33, Voigt (3).
- †*Bathystomella cordiformis* pp. 52, 53, Voigt (3).
- †*Beisselina* sp. p. 231, Voigt (4).—*B. furoni* sp. n. Miocene Iran, Furon & Balavoine p. 299.—*B. pachyderma* p. 11, *tristoma*, *quadrupunctata* p. 12, *amphiconica* p. 13, *Beisselina* sp. p. 47, Voigt (3).—*B. striata*, *filograna*, *variabilis*, *jussieu*, *Wiesemann* pl. 10.
- †*Beisselinopsis marginata* pp. 11, 13, Voigt (3).
- †*Bistustra infundibulum* synonym of *Virgocella virgo* p. 43, Voigt (3).
- †*Bubnoffiella* gen. n. (Ascopora, fam. inc. sed.), monotypical for *Homalostega suffulta* Marss. p. 22, *B. suffulta* p. 11, Voigt (3).
- Bugula* p. 66, measurements tabulated p. 69, key to species p. 72, *B. neritina* pp. 74, 105, *plumosa*, *purpuratincta* p. 76, *stolonifera* sp. n. Recent Britain p. 78, *avicularia* p. 80, *turbinata* p. 81, *flabellata* (with full synonymy) pp. 82, 105, *fulva* sp. n. = *ditrupae* Waters partim not Busk and *B. sp. 1* Silén, Recent Britain p. 86, *calathus* p. 87, *aquilirostris* sp. n. = *ditrupae* auct. not Busk, Recent Britain p. 89, *simplex* (with full synonymy) pp. 91, 105, larvae p. 93, *ditrupae* (with full synonymy) p. 94, *simplex*, *plumosa* and *plumosa* var. *aperta* discussed p. 96, *stolonifera*, *spicata* and other species discussed p. 97, *gracilis* var. *uncinata* probably = *turrita* and probably not British, *turrita* described p. 98, table of characters of some biserial species p. 99, Ryland (2).—*B. neritina* p. 573, Kawahara.—*B. avicularia* p. 238, Schneider.—*B. neritina* p. 99, Numakuni.
- Bugulidae*, Ryland (2) p. 67.
- †*Callopora lineata*, *dumerilii*, Furon & Balavoine p. 298.

†*Cellaria iranensis* sp. n. Miocene Iran, Furon & Balavoine p. 298.

†*Cellepora* sp., Furon & Balavoine p. 301.—*Cellepora dispersa* von Hagenow rejected from *Pyripora* (Herpetopora), Thomas & Larwood p. 373.—*C. accumulata* var. *bellicosa* synonym of *C. accumulata* p. 17, *pyramidalis* a cribrimorph p. 21, *irregularis* von Hag. 1846, not von Hag. 1839 see *Onychocella subirregularis* p. 28, "*Cellepora*" *occultata* p. 53, Voigt (3).

Cellepora fusca pp. 53, 68, *costatii* pp. 53, 69, Androsova.

†*Columnotheca cribrata* p. 49, Voigt (3).

†*Conopeum lacroixii*, Furon & Balavoine p. 297.

Conopeum reticulum pp. 43, 57, Androsova.

†*Coscinopleura* sp. p. 230, Voigt (4).—*C. elegans elegans* p. 11, Voigt (3).

Cribulina annulata pp. 44, 58, Androsova.

†*Cryptostomella gastropora* p. 48, Voigt (3).

Cryptonula pallasiana p. 47, 61, Androsova.

†*Cupuladria* sp., Jacob & Sastri pl. 14.

Cyphonautes p. 14, Pinto.

Dakaria typica pp. 48, 63, Androsova.

†*Dimorphomicropora* gen. n. (Steginoporellidae) type-species *D. voighti* sp. n. Cretaceous France p. 155, as *Dimorphocellaria voighti* p. 157, Ducasse & Vigneaux.

†"*Dioptrora*" *devia* p. 45, Voigt (3).

†*Discofustrellaria cerioporacea* p. 46, Voigt (3).

†*Distaneschara familiaris* p. 24, genus defined p. 25, Voigt (3).

Electra crustulenta var. *spiculata* pp. 43, 58, Androsova.—*E. verticillata*, Robin & Prenant p. 121.—*E. pilosa*, p. 174, Kerneis.

Emballothea incisa p. 48, 63, Androsova.

†*Eschara tubulifera* referred to *Tubucella*, Furon & Balavoine p. 300.—*E. ezarata* and *pulvinata* synonyms of *Virgocella virgo* p. 43, Voigt (3).

Eurystomella bilabiata, Kataoka p. 396.

†*Floridina trifolium* synonym of *F. canui* p. 30, Voigt (3).

†*Flustrella* sp. p. 230, Voigt (4).

†*Herpetopora clavigera* and *comptoniensis* both synonyms of *Pyripora lazata* p. 375, *H. danica* and *danica* var. *tilania* rejected from *Herpetopora* [*Pyripora*] p. 381, Thomas & Larwood.—*H. dispersa* p. 33, Voigt (3).

†*Hippomenella magnifica* sp. n. Miocene Iran, Furon & Balavoine p. 299.

Hippoporella hippopus pp. 49, 64, Androsova.

†*Hippopozoon typicum*, Balavoine p. 248.

†*Hippothoa gracilis* d'Orbigny and *H. desiderata* Novák both rejected from *Pyripora* [*Herpetopora*] p. 373, 374, *lazata* d'Orbigny, *cruciata* Reuss, *labiata* Novák, *dispersa* Marsson not von Hag. all synonyms and referred to *Pyripora lazata* p. 375, Thomas & Larwood.

†*Homalostega vincularioides* p. 20, *suffulta* type-species of *Bubnoffiella* q.v. p. 22, *cavernosa* synonym of *Bubnoffiella suffulta* p. 22, *conveza* p. 31, "*Homalostega*" *vulcani* p. 32, Voigt (3).

†*Hoplitaechnella vespertilio* p. 20, *nonna* p. 23, Voigt (3).

Isoschizoporella gen. n. (Hippoporinidae) type-species *Schizoporella tumida* var. *tricuspis* Calvet 1909, as *I. tricuspis* (Calvet), p. 488, Rogick (1).

†*Latereschara ovigera* synonym of *L. galeata* p. 10, Voigt (3).

†*Lepralia montifera*, Boda pp. 645, 745.

Lichenella brentii, proposed rejection from zoological nomenclature, Hastings p. 244.

†*Lunulites salebrosa* pp. 27, 40, *goldfussi* p. 39, *mitra* p. 40, *semilunaris* pp. 40, 46, *spiralis* p. 49, Voigt (3).

Lyrula hippocrepis pp. 45, 59, Androsova.

Macroporina gen. n. (Aspidostomatidae) type-species *Macropora (Retepora) goudensis*, Eocene France, Balavoine p. 247.

†*Margarella cereoides*, Furon & Balavoine p. 300.

†*Mastigophorella simplex*, Furon & Balavoine p. 301.

†*Membranipora hexagona* v. Hag. pp. 13, 29, *elliptica*, *anterides*, *ovigera* p. 14, *tripunctata*, *aviculosa*, *lyra* p. 15, *repetita* synonym of *M. tripunctata* p. 15, *dolium* synonym of *lyra* p. 16, *marssoni* synonym of *plicatella* p. 21, *demissa* synonym of *Amphiblestrum ringens* p. 31, *calceolus* p. 20, *plicatella* p. 21, *tenebrosa* p. 30, *glaphyra*, *baculina* p. 44, *trifaria* p. 55, Voigt (3).—"*Membranipora*" (cf.) p. 230, Voigt (4).

Membranipora membranacea p. 1246 et seq., Brien (3).—*M. membranacea*, Lutaud.

†*Membraniporella squamulosa* p. 16, Voigt (3).

†*Micropora goudensis* sp. n. Eocene France, Balavoine p. 247.—*M. coriacea*, *elegans* Canu referred to *Steginoporella*, Furon & Balavoine p. 298.—*M. amphora*, *monticula* p. 24, Voigt (3).

Microperella ciliata pp. 49, 64, *malusii* pp. 50, 65, Androsova.

†*Mucronella ventricosa*, Furon & Balavoine p. 300.

Neoeuthyris woosteri p. 244, Hastings.

†*Nephropora elegans* p. 47, Voigt (3).

†*Onychocella incarcerationa* for *Rhagastoma inelicans* var. *incarcerata*, *O. herennia* synonym of *O. irregularis*, *O. rowei*, *congesta* p. 9, *nysti* pp. 10, 13, *subirregularis* nom. n. for *Cellepora irregularis* von Hag. 1846 not von Hag. 1839, *armata* synonym of *nodulifera* p. 28, *roboreta* p. 31, *crassipes* p. 35, *matrona* p. 43, *auriculata* p. 50, *regularis* p. 55, Voigt (3).

†*Orbitulites creplinii* not Polyzoan (= *Porosphaera* sp.), Voigt (3) p. 41.

†*Pachythecella ehrenbergii* p. 46, Voigt (3).

Parasmittina hanzawae sp. n. Recent Sea of Japan, Kataoka p. 397.

†*Pavonulites richteri* p. 56, Voigt (3).

†*Phractoporella constricta* p. 32, Voigt (3).

†*Pliophloea cornuta* p. 20, genus defined p. 25, Voigt (3).

†*Polycephalophora multiceps* synonym of *P. crepidula* p. 25, Voigt (3).

†*Poricella davidi* sp. n. Eocene France, Balavoine p. 248.

†*Porina socia* tentative synonym of *Pachythecella ehrenbergii* p. 46, Voigt (3).

†*Puncturiella sculpta* p. 44, Voigt (3).

†*Pyrporea* p. 370, key to Cretaceous species, *P. laxata* lectotype chosen p. 371, *anglica*, *cruciata* Thomas & Larwood partim = *anglica* p. 375, *filum* p. 378, *tezana*, *fazensis* p. 379, *parvicauda*, *filimargo* p. 380, Thomas & Larwood.

†*Quadriceclaria* sp. p. 231, Voigt (4).—*Q. elegans*, Cheetham (3) p. 289.

Reginella furcata pp. 44, 59, Androsova.

†*Relepora couchi*, Furon & Balavoine p. 300.—*R. pacifica* pp. 52, 67, Androsova.

†*Rhagasostoma ineleans* var. *incarcerata* given specific rank as *Onychocella incarcerata* p. 9, *trimense* synonym of *Onychocella nysti* p. 10, Voigt (3).

†*Rhammatopora* p. 381, key to species, *R. gaultina*, *pembrokei* and *vinei* synonyms of *gaultina* p. 382, *gasteri* sp. n. Cretaceous England p. 384, Thomas & Larwood.

†*Rhiniopora* (?) *incisa* p. 27, Voigt (3).

†*Rimosocella* gen. n. (Microporidae) type-species *Quadriceclaria laciniata* Canu & Baessler Eocene U.S.A., Cheetham (3) p. 287.

†*Romancheina goustensis* sp. n. Eocene France, Balavoine p. 247.

†*Rosselliana gouni* sp. n. Miocene Iran, Furon & Balavoine p. 298.

†*Rotiporina producta* p. 47, Voigt (3).

Schizomavella alexandriae sp. n. Recent Mediterranean p. 30, O'Donoghue & Watteville.

Schizoporella unicornis pp. 47, 62, Androsova.—*S. tumida* var. *tricuspid* Calvet raised to species and made type of *Isoschizoporella* q.v., p. 488, Rogick (1).

Scrupocellaria capreolus, Gautier p. 105.

†*Semieschara cattoniana* var. *gimensis* synonym of *Onychocella nodulifera* p. 28, *manicosa* synonym of "*S.*" *labiata* p. 31, Voigt (3).

†*Semiescharinella complanata* p. 54, Voigt (3).

†*Sertella* (*Relepora*) *beaniana* p. 132, Reguant.

†*Siphonotyphlus tenuis* [*Siphonotyphlus*] p. 47, Voigt (3).

Smittina glomerata pp. 51, 67, Androsova.

Smittioidea prolifera pp. 50, 66, Androsova.

†*Steginoporella elegans*, Furon & Balavoine p. 298.

†*Stichomicropora biconstricta* p. 21, *erecta* p. 23, *membranacea* p. 30, Voigt (3).

†*Stichopora pentasticha* p. 33, *crassa* p. 56, Voigt (3).

†*Systemosoma asperulum* p. 10, Voigt (3).

†*Taeniopora* sp. p. 13, *T. behmi* p. 53, Voigt (3).

Toretocheilum gen. n. (Hippoporinidae) type-species *T. absidatum* sp. n. Recent Antarctica p. 479, Rogick (1).

Tricellaria occidentalis pp. 45, 60, Androsova.

†*Triccephalophora sherborni* p. 25, *vermicularis*, *galeata* p. 54, Voigt (3).

†*Trigonopora* (*Metrarabdotos*) *gironnica* subsp. *tarracensis* subsp. n. Miocene Spain p. 128, Reguant.

†*Tubucella tubulifera*, Furon & Balavoine p. 300.

Vibracellina mediterranea sp. n. Recent Mediterranean p. 12, O'Donoghue & Watteville.

†*Vincularia* spp. p. 230, Voigt (4).—*V. prismatica* p. 45, Voigt (3).

†*Virgocella virgo* p. 43, Voigt (3).

Watersipora cucullata p. 615, Skerman (1).

†*Woodipora disparilis* pp. 43, 44, Voigt (3).

PHYLACTOLAEMATA

Cristatella mucedo p. 1064 et seq., Brien (3).—*C. mucedo* p. 269, Hoc.

Fredericella sultana p. 1062 et seq., Brien (3).

Lophopodella carteri, Oda p. 111.

Lophopus crystallinus p. 1066 et seq., Brien (3).

Pectinatella magnifica p. 70, Knox.

Plumatella fungosa p. 1062 et seq., *repens* p. 1098 et seq., Brien (3).

ENTOPROCTA

Loxosoma annelidicola, Ryland & Austin p. 430.

Loxosomella kefersteini p. 423, *antedonis* p. 425, Ryland & Austin.

Pedicellina cernua p. 1054 bis, Brien (3).

Urnatella gracilis p. 1735, Kolosvári & Abricossow.

INCERTAE SEDIS

†*Bauncia chablaisensis*, alga?, Poljak p. 312.

†*Blastochaetes capilliformis*, alga?, Poljak p. 312.

†*Chaetes angustitubulatus*, alga?, Poljak p. 312.

